Jet Propulsion Laboratory
California Institute of Technology

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June 12, 2000
Refer to: 930-00-08-ESB:ms

TO: Distribution

FROM: Eugene S. Burke

SUBJECT: Minutes for the Joint Users Resource Allocation Planning Committee Meeting held May 18, 2000.

NEXT JURAP MEETING:
Thursday, June 15, 2000
JPL Bldg. 303, Room 209 – 1:00 p.m.

We have instituted a simple Teleconference capability.
Please contact D. Morris if you wish to participate.
In the future, we will set up a call-in phone line.

Attendees:

E. Burke	J. Kehrbaum	G. Martinez	J. Osman
J. Hall	K. Kim	J. McClure	P. Tay
W. Hincy	N. Lacey	D. Morris	T. Thompson
J. Hodder	F. Leppla	K. Moyd	I. J. Webb
			G. Wright

The Joint Users Resource Allocation Planning Committee meets monthly to review the status of Flight Projects and other resource users and to identify future requirements and outstanding conflicts. The last regular meeting was held on May 18, 2000, at the Jet Propulsion Laboratory.

Introductory Remarks – G. Burke

Consensus Building Institute (CBI) team members will be contacting RAP/DSN personnel for an interview, starting June 12, 2000, regarding the DSN resource allocation process.

Special Report:

DSS-14 X-Band Uplink Installation/Bearing Regrout Downtime - J. Osman

The Bearing Regrout will be completed next week. Testing for all systems and DEMO tracks are scheduled for July 3 through 7, 2000. We are on schedule for DSS-14 to be operational July 8, 2000.

Action Items - February 2000 RARB – D. Morris

Action Item 1: Galileo and GSSR indicated that the resolution of this action item be delayed until all project detailed requirements are in the database for these weeks (46-49). M. Slade and J. McClure were hesitant to negotiate unless they were assured that they would not have additional contentions with other users. These weeks will be addressed by the RAP Team in early July.

Action Item 2: Kevin Kim requested that this action item be closed due to uncertainties in some project requirements. Weeks 01 - 04 have been updated with the latest project requirements. Thanks to the cooperation of the project representatives, the percentages of hours remaining in contention for these weeks are follows: Week 01 - 1.41%; Week 02 - 4.05%; Week 03 - 4.97%; and Week 04 - 3.92%. E. Hampton and K. Martinez will conduct all future conflict negotiations for these weeks.

Resource Analysis Team – F. Leppla

MADB - Mission requirements input and testing continue. TIGRAS - Forecasting and scheduling testing continue. Weeks 29 - 32 (through 08/13/00) was released to the DSN on May 15, 2000.

DSS Downtime Forecast – N. Lacey

Jeff Osman submitted a new request to the DSN for Antenna Controller Replacement downtimes for the 70M and 34HEF subnets. Miguel Mardena, NSP, submitted a two-week downtime request for installation of Radio Science H/W and S/W at DSS-25 prior to December 15, 2000.

DSN Operations – J. Hodder

The DSN operations performance for March and April is as follows:

Data Type	March 2000	April 2000
Telemetry	99.2%	99.0%
Tracking	99.0%	98.5%
Command	99.1%	98.5%
Monitor	99.7%	99.4%
Radio Science	99.9%	99.3%
VLBI	95.8%	96.2%

Goldstone Solar System Radar – M. Slade

New request for S-band observations of the Moon's South Pole in Winter 2000. Observations will be: Arecibo Transmitting; DSS-14 Receiving. The purpose of these observations is an attempt to settle a debate about clean ice deposits in Lunar South polar permanently shaded regions.

Radio Astronomy / Special Activities – G. Martinez

Clock Sync was performed on DOY 105 with DSS-15/65. DSS-65 reported an antenna problem. No failures were reported at DSS-15. Ninety-six percent of data time utilized.

Cat M & E was performed on DOY 114 with DSS-15/65. DSS-65 reported an antenna problem. No problems were reported by DSS-15. Ninety-seven percent of data time utilized. Cat M & E was performed on DOY 120 with DSS-15/65. DSS-15 reported an antenna problem. No problems were reported by DSS-65. Ninety-three percent of data time utilized.

Metrics - 2 observations - 95% of data time utilized.

European VLBI Network: Technical Operations Group Conference was attended by RASA CSR, Pam Wolken. She received EVN inputs on the DSN. The DSN data exceeded EVN expectations. EVN experimenters were impressed and are ecstatic by the data received.

Future Activities: Space Geodesy Program - CORE-B701 and Europe-56 will supported by DSS-65. Gravity Probe-B - DSS-43/65 will support GPB. European VLBI Network (EVN) - DSS-63 will support GO003.

Flight Projects Reports:

Ulysses - I. J. Webb

Spacecraft operations are normal. Currently, Earth pointing maneuvers are being conducted every seven days. Instrument calibrations and reconfiguration are performed as required. DOY 117 - Ulysses Ops Team successfully tested the ECC using DSS-24 for Uplink, Downlink, Command and Ranging. DOY 128 - DSS-34 lost ground receiver lock due to antenna keyhole, Total Realtime Outage 27 minutes. DOY 132 - While DSS-43 was tracking (near Zenith), DSS-34 went to Zenith to calibrate their transmitter. Their uplink was received by the spacecraft, which caused a short outage. The problem is being worked.

Galileo Europa Mission – J. McClure, Jr.

Continued the playback of Io-27 encounter data. Exited Solar conjunction on May 17, 2000. Future plans: Execute OTM-87, May 19, 2000; Ganymede encounter, May 20, 2000. Complete the playback of Io-27 encounter data; Begin the playback of Ganymede-28 encounter data and Execute OTM-88 on May 24, 2000.

Deep Space 1 – K. Moyd

Current status: Spacecraft is in the nominal state: Sun-pointed "barbecue" mode. May 9, 2000, took 20 images for initial acquisition analysis. Data partially returned.
Near term plans: Complete data return of the 20 images; probably turn failed Stellar Reference Unit off May 24 or 26; download spacecraft status and upload utility sequences in preparation for Flight Software Load.

Near Earth Asteroid Rendezvous (NEAR) – J. Miller

NEAR has been in orbit around the Asteroid Eros for 94 days. Spacecraft is healthy. Spacecraft momentum management events successful. Multi spectral Imager (MSI) commanding problems continue to be encountered. All OCM-5 & 6 successfully completed. NLR Shutdown on DOY 123 due to tripping overcurrent rule. Quickly restored to operations and flight software changes requested to prevent recurrence.

Stardust – R. Ryan

Spacecraft is in good health, operating well. Completed Interstellar Dust Collection Period 1. Next major event is Earth Gravity Assist on January 15, 2001. For additional information on Stardust: http://stardust.jpl.nasa.gov

Voyager – J. Hall

Voyager 1 - Heliocentric distance - 77.5 AU, RTLT - 21h15m30s. Spacecraft remains healthy. Major activity - DTR Playback (loss - DSS-14 Down), ASCAL, and MAGROL.

Voyager 2 - Heliocentric distance - 60.9 AU, RTLT - 16h44m18s. Spacecraft remains healthy. Voyager Home Page: http://vraptor.jpl.nasa.gov

Cassini – D. Doody

Passed superior conjunction on 13 May, 2000. Excellent DSN support overall. Instrument Checkout (ICO) will be uplinking next week. TCM 14 is scheduled for 14 June 2000, course adjustment for Phoebe Encounter prior to SOI in 2004. Jupiter Flyby science planning is on schedule. All recourse allocation requests are in the system now (thru early 2001).

Mars Surveyor Operations Office (MSOO) – E. Brower

Beta-Supplement operations began February 7, 2000. Completed one year of mapping March 9, 2000. Mapping Orbit #5000 was April 20, 2000. Mars Orbiter to launch in April 2001. Lander looking to fly in 2003.

Advance Composition Explorer (ACE) **- No Report**

Chandra **- No Report**

IMAGE **- No Report**

***ISTP* - No Report**

***NOZOMI (Planet-B)* - No Report**

***U.S. Space VLBI* - No Report**

ACE
Afkhami, F. . . . . GSFC 428.2*
Machado, M. J. . . . . GSFC Code 428.2*
Myers, David A. . . . . GSFC Code 428.2*
Sodano, R. J. . . . . GSFC Code 581.1*

Canberra Deep Space Communications Complex
Churchill, P. . . . . CDSCC #
Jacobsen, R. . . . . CDSCC #
O'Brien, J. J. . . . . CDSCC #
Ricardo, L. . . . . CDSCC #
Robinson, A. . . . . CDSCC #
Wiley, B. . . . . CDSCC #

Cassini
Arroyo, B. 264-235
Chin, G. E 230-310
Doody, D. F. 230-301
Frautnick, J. C. 230-301
Gustavson, R. P. 230-301
Maize, E. H. 230-104
Mitchell, R. T. (PM) 230-205
Webster, J. L. 230-104

Chandra
Gage, K. R. . . . . SAO*
Lavoie, A. R. (PM) . . . . . MSFC Org. FD03*
Marsh, K. . . . . TRW*
Weisskopf, M. C. (PS) . . . . . MSFC Org. SD50*
Wicker, D. . . . . TRW*
Wright, G. M. . . . . MSFC Org. FD03*

Crustal Dynamics
Clark, T. A. (PM) . . . . . GSFC Code 920.3 *
Thomas, C. C. . . . . GSFC Code 920.1*
Vandenberg, N. R. . . . . GSFC Code 920.1*
Wolken, P. R. 507-105

Deep Space 1
Hunt, J. C. 230-207
Moyd, K. I. 230-207
Rayman, M. D. 230-207
Tay, P. 264-235
Varghese, P. (PM) 230-207
Yetter, K. E. 264-235

Galileo
Compton, B. 230-102
Erickson, J. K. (PM) 264-419
Huynh, J. C. 230-102
McClure, Jr., J. R. 230-102
Paczkowski, B. G. 230-260
Pojman, J. L. 301-276

Goldstone Deep Space Communications Complex
Holmgren, E. DSCC-25
Massey, K. DSCC-61
McConahy, R. DSCC-33
McCoy, J. DSCC-57
Mischel, D. DSCC-37
Recce, D. J. DSCC-37
Sturgis, L. DSCC-33

Goldstone Orbital Debris Radar (GODR)
Goldstein, R. M. (PM) 300-227

Goldstone Solar System Radar (GSSR)
Haldemann, A. F. 238-420
Hills, D. L. 238-420
Ostro, S. J. 300-233
Slade, III, M. A. (PM) 238-420
Wolken, P. R. 507-105

Gravity Probe-B
Keiser, M. (PS) . . . . . Stanford Univ.*
Shapiro, Prof. I. I. . . . . Harvard*

ICE Radio Science
Woo, R. 238-725

IMAGE
Abramo, C. A. 507-120
Burley, R. J. . . . . GSFC Code 632.0*
Green, J. L. . . . . GSFC Code 630*

ISTP (Cluster II)
Abramo, C. A. 507-120
Chang, A. F. 264-844
Christensen, J. L. . . . . GSFC Code 404.0*
Dutilly, R. N. . . . . GSFC Code 581.1*
Pickett, J. . . . . U. of Iowa*
Williams, H. A. . . . . GSFC Code 444.0*
Worrall, W. D. (PM) . . . . . GSFC Code 444.0*

ISTP (GEOTAIL/POLAR/SOHO/WIND)
Abramo, C. A. 507-120
Alexander, H. 507-120
Bush, R. I. . . . . Stanford Univ.*
Chang, A. F. 264-844
Dutilly, R. N. . . . . GSFC Code 581.1*
Hammer, D. S. . . . . GSFC Code 428.2
Hearn, S. P. . . . . GSFC Code 450.C*
Leventry, G. A. . . . . GSFC Code 450.C*
Mahmot, R. E. . . . . GSFC Code 444.0*
Milasuk-Ross, J. . . . . GSFC Code 428.5*
Miller, K. A. . . . . GSFC Code 450.C*
Mish, W. H. . . . . GSFC Code 690*
Nace, E. M. . . . . GSFC Code 450.8
Pukansky, S. M. . . . . GSFC Code 450.C*
Williams, H. A. . . . . GSFC Code 444.0*
Worrall, W. D. (PM) . . . . . GSFC Code 444.0*

JPL/General
Burgess, L. N 230-107
Burow, N. A. 238-540
Burton, M. E. 169-506
Chadbourne, P. 230-207
Finley, S. G. 11-116
Gershman, R. 264-440
Hirst, E. A. 301-180
Holladay, J. A. 303-404
Jurgens, R. F. 238-420
Kahn, P. B. 301-486
Kliore, A. J. 161-260
Kobrick, M. 300-233
Moore, W. V. 161-260
Morabito, D. D. 161-260
Naudet, C. J. 238-600
Resch, G. M. 238-600
Robbins, P. E. 161-260
Silva, A. 149-200
Smith, J. L. 301-180
Taylor, A. H. 301-350
Toyoshima, B. 301-385
Winterhalter, D. 169-506
Woo, H. W. 126-221
Yung, C. S. 238-808

Madrid Deep Space Communications Complex
Chamarro, A. . . . . MDSCC #
Rosich, A. . . . . MDSCC #

MAP
Abramo, C. A. 507-120
Citrin, E. A. (PM) . . . . . GSFC Code 730*
Coyle, S. E. . . . . GSFC Code 581.0*
Dew, H. C. . . . . GSFC Code 423.0*

Mars Express
Thompson, T. W. 300-227

Mars Global Surveyor
Arroyo, B. 264-235
Brower, E. E. 264-235
Thorpe, T. E. 264-214
Yetter, K. E. 264-235

Mars Program Office
Cutts, J. A. 264-426
Jordan, Jr., J. F. 264-426
McCleese, D. J. 264-426
Naderi, F. M. 180-703

Mars Surveyor Operations Office
Cook, R. A. 264-214
Torres, R. G. 264-235
Varghese, P. 230-207

NASA Headquarters
Costrell, J. A. . . . . Code MT*
Hertz, P. . . . . Code SR*
Holmes, C. P. . . . . Code SR*
Spearing, R. E. . . . . Code M-3*

NASA/ARC/General
Campo, R. A. . . . . ARC 244-14*

NASA/GSFC/General
Barbehenn, G. M. . . . . GSFC Code 440.8*
Levine, A. J. . . . . GSFC Code 451*
Martin, J. B. . . . . GSFC Code 453.0*

NASA/SOMO
Dalton, J. T. . . . . GSFC Code 720.0*
Dowen, A. Z. 303-400
Hall, V. F. . . . . JSC Code TG*
Morse, G. A. . . . . JSC Code TA*
Thompson, E. W. . . . . JSC Code GA*

NEAP
King, J. A. . . . . SpaceDev*
Ridenoure, R. . . . . SpaceDev*

NEAR
Antreasian, P. G. 301-276
Farquhar, R. (MM) . . . . . APL 2-155*
Holdridge, M. . . . . APL 13N-319*
Miller, J. K. 301-125J
Moore, G. A. . . . . APL 13N-319*
Santo, A. G. . . . . APL M1-126*
Williams, B. G. 301-125J

NOZOMI (Planet B)
Chang, A. F. 264-844
Tay, P. 264-235
Yetter, K. E. 264-235

Outer Planets/Solar Probe
Carraway, J. B. 301-335
Ludwinski, J. M. 301-335

Radio Astronomy
Klein, M. J. (PM) 303-402
Kuiper, T. B. (PS) 169-506
Martinez, G. 507-120
Wolken, P. R. 507-105

Space Infrared Telescope Facility (SIRTF)
Arroyo, B. 264-235
Ebersole, M. M. 264-767
Gallagher, D. B. (PM) 264-767
Kwok, J. H. 264-767

Space Technology 3
Guske, P. J. 301-486
Livesay, L. L. (PM) 301-486
Patel, K. C. 198-219

Stardust
Atkins, K. L. (PM) 301-429
Duxbury, T. C. 301-429
Ryan, R. E. 301-341
Tay, P. 264-235
Yetter, K. E. 264-235

TMOD / General
Coffin, R. C. 303-400
Doms, P. E. 303-400
Polansky, R. G. 303-400
Squibb, G. F. 303-400
Stelzried, C. T. 303-407

TMOD DSMS Engineering
Freiley, A. J. 303-404
Kimball, K. R. 303-404
Klose, J. C. 303-403
Osman, J. W. 303-404
Sible, Jr., R. W. 303-404
Statman, J. I. 303-404

TMOD DSMS Operations
Almassy, W. T. 502-420
Coleman, G. D. 600-174
Covate, J. T. 507-105
Dillard, D. E. 502-320
Frazier, R. 507-105
Gillam, I. T. 502-400
Green, J. C. 507-120
Hodder, J. A. 303-403
Knight, A. G. 507-120
Landon, A. J. 507-105
Linick, T. D. 303-403
Martinez, G. 507-120
Nevarez, R. E. 507-105
Roberts, J. P. 507-105
Salazar, A. J. 303-403
Schroedr, H. B. 507-120
Short, A. B. 507-120
Spradlin, G. L. 303-402
Wackley, J. A. 303-403
Waldherr, S. 507-120
Watzig, G. A. 502-420
Wert, M. 502-420

TMOD DSMS Plans & Commitments
Abraham, D. S. 301-472
Altunin, V. I. 303-402
Bathker, D. A. 303-402
Benson, R. D. 264-844
Berman, A. L. 264-844
Beyer, P. E. 264-844
Black, C. A. 303-402
Cesarone, R. J. 303-402
Chang, A. F. 264-844
Gillette, R. L. 264-844
Griffith, D. G. 303-402
Holmes, D. P. 264-844
Kazz, G. J. 303-402
Luers, E. B. 303-402
McKinney, J. C. 264-844
Miller, R. B. 303-402
Peng, T. K. 303-402
Poon, P. T. 264-844
Slusser, R. A. T-1720D
Yetter, B. G. 264-855

TMOD DSMS RAPSO
Borden, C. S. 301-165
Burke, E. S. 303-403
Caputo, R. 303-403
Hampton, E. 600-174
Hincy, W. 600-174
Kehrbaum, J. M. 301-180
Kim, K. 600-174
Lacey, N. 600-174
Leppla, F. B. 601-110
Lineaweaver, S. 600-174
Martinez, K. A. 600-174
Morris, D. G. 303-403
Tan, K. . . . . TBD
Wang, Y-F. 301-165
Zendejas, S. C. 301-165

Ulysses / Voyager
Bray, T. L. 264-114
Brymer, B. F. 264-114
Cummings, A. C. . . . . CIT*
Hall, Jr., J. C. 264-801
Kurth, W. . . . . U. of Iowa*
Massey, E. B. (PM) 264-801
Nash, J. C. 264-114
Smith, E. J. (PS - ULS) 169-506
Webb, I. J. 264-114

U.S. Space VLBI
Altunin, V. I. 303-402
Miller, K. J. 264-828
Smith, J. G. (PM) 264-828

YOHKOH
Chang, A. F. 264-844

Other Organizations
Crimi, G. F. . . . . SAIC*
Laemmel, G. . . . . DLR-GSOC*
Wanke, H. . . . . DLR-GSOC*

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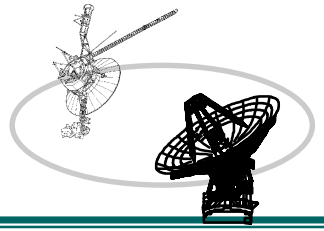
JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE
Action Item Status
From 01 February 2000 RARB
David G. Morris
May 18, 2000
NASA Jet Propulsion Laboratory



Action Item Summary

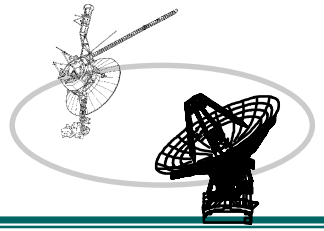
AI#	CP#	Year	Month(s)	Week(s)	System	Responsible	Due Date	Status
01	2	2000	November	46 – 49	DSS14	J. Erickson M. Slade	5/17/2000	Open

ACTION: Galileo Project Scientist and Goldstone Solar System Radar will work together to resolve the contention and provide RAPSO with their resolution by March 01, 2000. Note: This action item is related to action item #4 from the August 1999 RARB.

2	9-11	2001	January	01 – 04	70M,34M	F. Leppla	5/18/2000	Pending

ACTION: The Review Board directed the Resource Allocation Planning and Scheduling Office (RAPSO) to generate weekly schedules for Weeks 01 through 04, 2001, to determine the actual contention among the projects/users. As noted at the RARB, the 70M, 34HEF, and 34BWG subnets are heavily oversubscribed during these four weeks. Each project/user is requested to submit their detail requirements for Weeks 01 - 04, 2001 to RAPSO as soon as possible but no later February 18, 2000 to ensure that the preliminary schedule contains the latest interpretation of the detailed requirements. RAPSO will present the results at the March JURAP. Any unresolved contentions from the March JURAP will be resolved at a meeting in April 2000.

RESPONSE: At the March 16 JURAP, a plan for closure by 4/20/2000 was presented as well as a preliminary Week 1-4 schedule. An update was provided at the April JURAP with closure by 5/18.

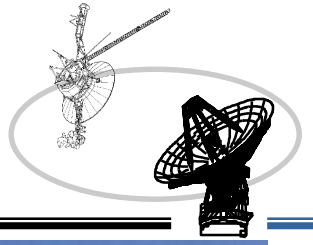


Action Item Summary, Cont'd

AI#	*CP#*	*Year*	*Month(s)*	*Week(s)*	*System*	*Responsible*	*Due Date*	*Status*
3	**n/a**	**2000**	**Jun - Jul**	**26 – 30**	**26M**	**J. Gagosian**	**3/01/2000**	**Closed**

ACTION: TDRS H is currently scheduled to launch on June 29, 2000. TDRS H is requested to send RAPSO their detailed requirements and view period file for June and July 2000 to aid RAPSO. RAPSO will analyze the launch impact on users and report the results at the March JURAP.

RESPONSE: Received on 3/16/2000 planned schedule for support based on nominal 6/29/2000 launch.



JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

Resource Analysis Team

Frank Leppla

May 18, 2000

NASA Jet Propulsion Laboratory

RESOURCE ALLOCATION PLANNING
JURAP - May 18, 2000

RESOURCE NEGOTIATION STATUS -

2000 WEEKS 29 - 32 (THRU 08/13/00) RELEASED TO DSN ON 05/15/00
2000 WEEKS 33 - 36 ARE SCHEDULED TO BE RELEASED ON 06/09/00

RARB ACTIVITIES -

ACTION ITEM #2 - SCHEDULE PREPARED FOR 2000 WEEKS 01 - 02
UPDATED MATERIAL ON MAY 3, 2000 - POSTED TO RAPSO WEBSITE
USER LOADING PROFILES AND MAJOR EVENTS DISTRIBUTED TO USERS
RESPONSES REQUESTED BY MAY 23, 2000 - NEXT WEEK

SPECIAL STUDIES COMPLETED

NONE

MISCELLANEOUS -

MADB - MISSION REQUIREMENTS INPUT AND TESTING CONTINUE
TIGRAS - FORECASTING AND SCHEDULING TESTING CONTINUE
RAPSO WEBSITE VARIOUS ADDITIONS AND UPDATES -
JURAP MINUTES, MISSION SET, ANTENNA IMPLEMENTATION MATRIX,
DOWNTIME PLANNING, MID-RANGE DATA, AND SPECIAL STUDIES

RAPSO HOME PAGE - HTTP://RAPWEB.JPL.NASA.GOV

DSN User / Mission Planning Set
1999 - 2010

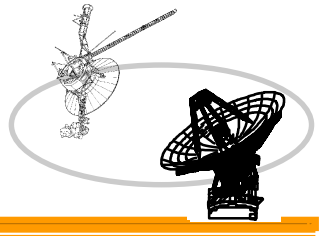
ONGOING/PLANNED PROJECTS				
Project	**Acronym**	**Launch or Start**	**EOPM**	**EOEM**
DSS Host Country	DSS	--	--	--
DSN VLBI Clock Sync and Catalog M&E	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
European VLBI Network	EVN	--	--	--
Radio Astronomy	RASA	--	--	--
Space Geodesy	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	12/31/19
Voyager 1	VGR1	09/05/77	12/31/80	12/31/19
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Galileo	GLL	10/18/89	12/07/97	03/11/01
Ulysses	ULS	10/06/90	09/11/95	12/31/04
ISTP - Geotail	GEOT	07/24/92	07/24/95	12/30/01
ISTP - Wind	WIND	11/01/94	11/01/97	12/30/01
Space VLBI	SVLB	02/01/95	09/30/01	- - -
ISTP - SOHO	SOHO	12/02/95	05/02/98	05/02/03
Near Earth Asteroid Rendezvous	NEAR	02/17/96	02/14/01	TBD
ISTP - Polar	POLR	02/22/96	08/23/97	12/30/01
Gravity Probe B	GRVB	06/01/96	12/31/01	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	02/01/02
Highly Advanced Laboratory for Communications and Astronomy	VSOP	02/12/97	09/30/01	- - -
Advance Composition Explorer	ACE	08/25/97	02/01/01	02/01/03
Cassini	CAS	10/15/97	06/30/08	06/30/10
NOZOMI (Planet-B)	PLNB	07/03/98	TBD	TBD
Deep Space 1	DS1	10/24/98	09/19/99	10/31/01
Stardust	SDU	02/07/99	01/14/06	- - -
Chandra X-ray Observatory	CHDR	07/23/99	TBD	TBD
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	03/10/02	- - -
ISTP - Cluster II (First Launch)	CLU2	07/12/00	10/12/02	TBD
ISTP - Cluster II (Second Launch)	CLU2	08/09/00	11/09/02	TBD
Microwave Anisotropy Probe	MAP	04/18/01	07/21/03	07/21/06
Genesis	GNS	01/07/01	09/07/03	- - -
Mars Surveyor 01 Orbiter	M01O	04/07/01	TBD	TBD
Space Infrared Telescope Facility	SRTF	12/01/01	02/01/07	- - -
International Gamma Ray Astrophysics Lab	INTG	04/22/02	06/23/04	06/23/07
Comet Nucleus Tour (CONTOUR)	CNTR	06/26/02	08/31/08	TBD
MUSES - C	MUSC	07/05/02	07/21/06	- - -
Rosetta	ROSE	01/12/03	07/07/13	- - -

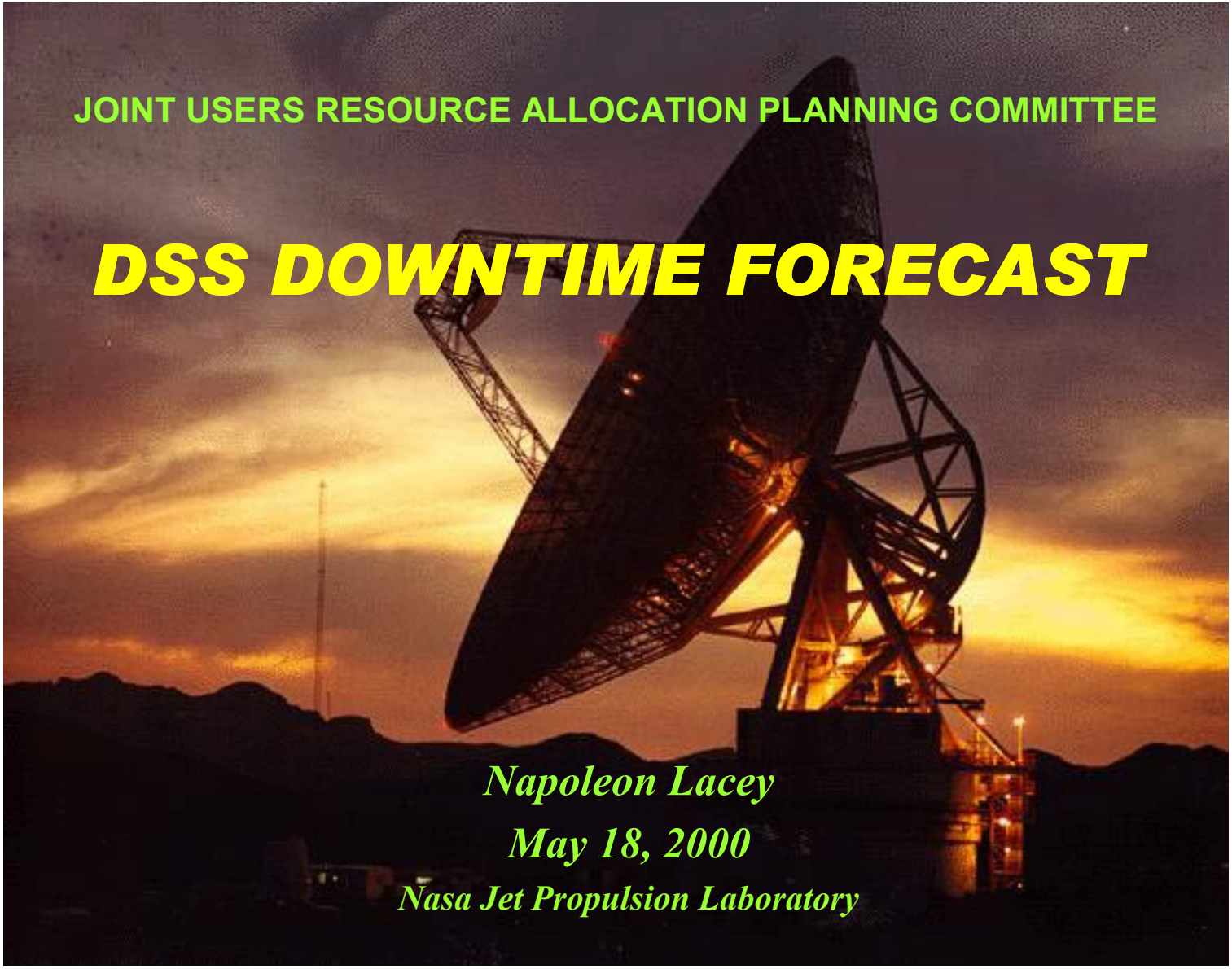
* Planning dates
** Planned Landing Date - Surface Operations begin via Comm Relay

DSN User / Mission Planning Set
1999 - 2010

ADVANCED PLANNING PROJECTS				
Project	**Acronym**	**Launch or Start**	**EOPM**	**EOEM**
Near Earth Asteroid Prospector***	NEAP	09/01/01	07/12/02	07/01/03
RadioAstron*	RADA	10/01/02	10/01/07	TBD
Lunar - A	LUNA	02/03/03	09/21/03	- - -
Mars Surveyor 03 Lander**	M03L	05/28/03	12/20/03	06/17/04
Mars Express Orbiter	MEO	06/01/03	12/01/05	06/01/08
Solar Stereo Leading	SLED	10/01/03	12/01/05	12/01/08
Solar Stereo Lagging	SLAG	10/01/03	12/01/05	12/01/08
Europa Orbiter	EURO	11/18/03	05/31/08	TBD
Deep Impact	DEEP	01/01/04	07/04/05	---
Messenger	MSGR	03/23/04	09/30/10	---
Pluto Kuiper Express	PKE	12/01/04	02/23/18	---
Space Technology 3	ST3	03/01/05	09/01/05	- - -
Mars 05 Lander	M05L	08/07/05	10/08/06	04/01/07
Mars 05 Orbiter	M05O	08/07/05	05/12/08	10/30/08
Highly Advanced Laboratory for Communications and Astronomy*	VSP2	01/01/06	01/01/11	---
Solar Probe	SOLP	02/01/07	03/31/15	---
ARISE*	ARSE	01/01/08	01/01/13	---

* Planning dates
** Planned Landing Date - Surface Operations begin via Comm Relay
*** DSN Support begins January 2002




JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE
DSS DOWNTIME FORECAST
Napoleon Lacey
May 18, 2000
Nasa Jet Propulsion Laboratory

JOINT USERS RESOURCE ALLOCATION PLANNING

May 18, 2000

DOWNTIME PLANNING

DSN Downtime & Test Schedule is located on the RAP WWW Homepage at:

http://rapweb.jpl.nasa.gov

Although every effort is made to ensure the accuracy of this Downtime Planning report, changes can and do occur. The DSN 7-Day Schedule takes precedence over this document.

RESOURCE ALLOCATION PLANNING
REQUEST FOR DSN DOWNTIME

FACILITY	TASK	[REQUEST]	Duration
GOLDSTONE		**2000 - 2004**	
DSS-16	**Replace Servo Hydraulic Drive**	**[11/01/00 - 09/15/01]**	**- 4 Weeks**
	Proposed Schedule Pending Approval	(08/20/01 - 09/15/01)	
DSS-14	**Upgrade 70M Servo Drive**	**[10/01/00 - 06/01/01]**	**- 10 Weeks**
	Proposed Schedule Pending Approval	02/04/02 - 04/14/02	10 Weeks
DSS-14	**Antenna Controller Replacement**	**[12/01/03 - 09/01/04]**	**- 13 Weeks**
DSS-15	**Antenna Controller Replacement**	**[03/01/03 - 07/15/03]**	**- 9 Weeks**
DSS-25	**Install Radio Science - H/W & S/W**	**[10/02/00 - 12/15/00]**	**- 2 Weeks**
CANBERRA			
DSS-43	**Upgrade 70M Servo Drive**	**[10/01/01 12/30/02]**	**- 12 Weeks**
	Proposed Schedule Pending Approval	09/16/02 - 12/08/02	12 Weeks
	Add NIB Ball Joint/Pad Refurbish		
DSS-43	**Antenna Controller Replacement**	**[12/01/03 - 09/01/04]**	**- 10 Weeks**
DSS-45	**Antenna Controller Replacement**	**[07/15/03 - 11/30/03]**	**- 7 Weeks**
DSS-46	**Replace Servo Hydraulic Drive**	**[10/01/02 - 10/01/03]**	**- 4 Weeks**
MADRID			
DSS-63	**Upgrade 70M Servo Drive**	**[10/01/01 12/30/02]**	**10 Weeks**
DSS-63	**Antenna Controller Replacement**	**[12/01/03 - 09/01/04]**	**- 10 Weeks**
DSS-63	**Ball-Joint/Pad Refurbrishment**	**[05/01/03 - 05/01/04]**	**- 4 Weeks**
DSS-65	**Antenna Controller Replacement**	**[07/15/03 - 11/30/03]**	**- 7 Weeks**

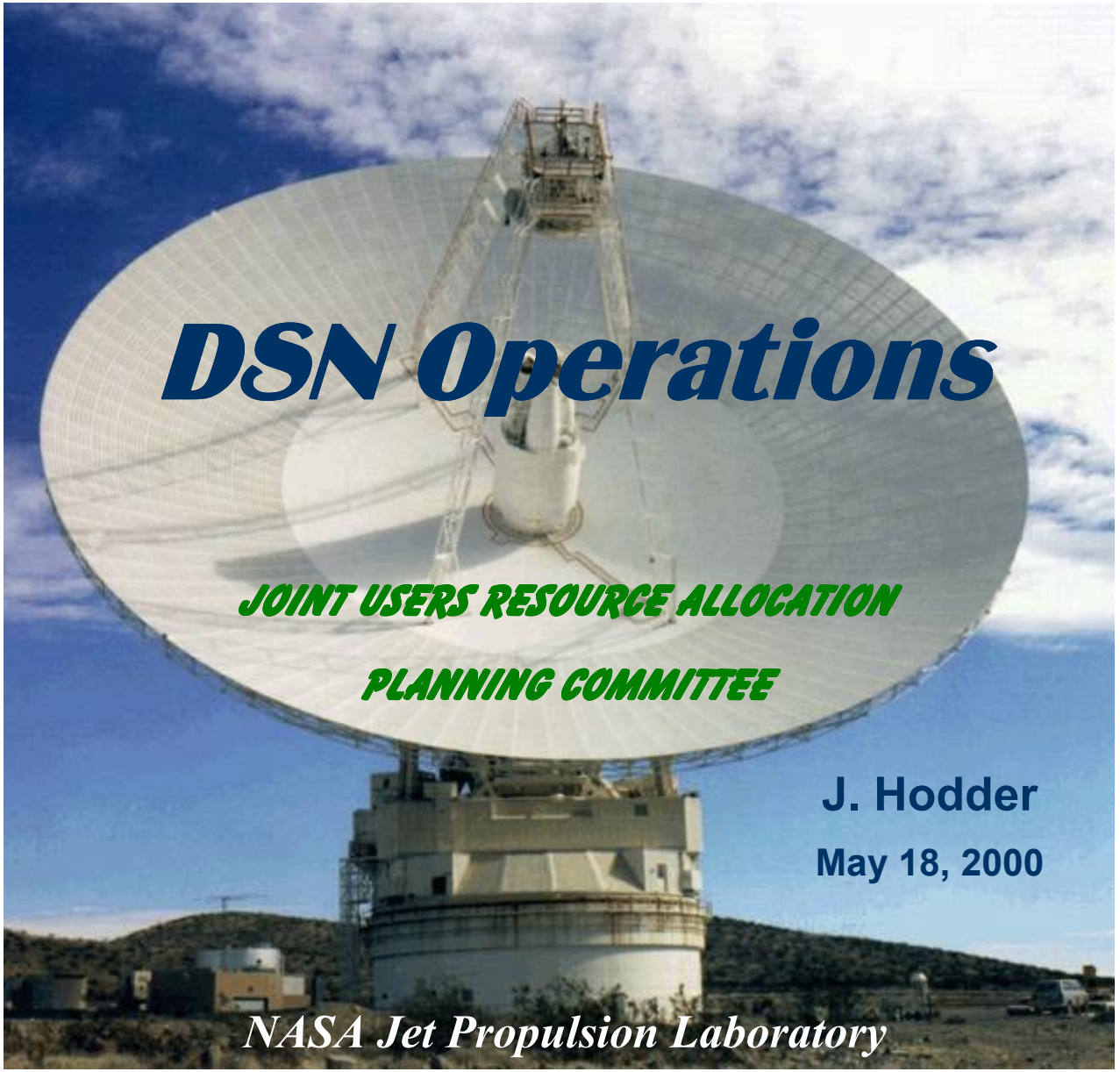
NOTE: Antenna Controller Replacements - Completion Ranking
1. Goldstone 2. Canberra 3. Madrid - l Month interval between each complex

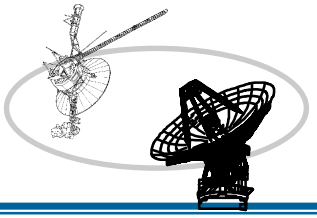
05/18/00 NL NOTE Request Window = [Earliest Start - Latest Finish]

MAJOR DSN DOWNTIMES by DATE

03/16/2000 15:56 UTC Time
05/18/2000 08:55:32 Your Local Time

2000							
Site	**Description**	**Start**	**End**	**Total Days**	**Weeks**	**Start DOY**	**End DOY**
DSS 14	70M X-Band Uplink	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 14	NIB - Major Bearing Regrout	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 14	NIB - Counterweight	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 14	NIB - Az Cablewrap Rehab	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 14	NIB - Replace 70M Motor	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 14	NIB - Feedcone Structure	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 14	NIB - Az El Bull Gear Repair	03/01/00 00:00	07/08/00 23:59	130	09 - 27	061	190
DSS 63	Replace 70M Motor Control	07/10/00 00:00	07/30/00 23:59	21	28 - 30	192	212
DSS 63	NIB - Chiller+HtExch HVAC	07/10/00 00:00	07/30/00 23:59	21	28 - 30	192	212
DSS 65	Replace S/R Drive	07/31/00 00:00	08/13/00 23:59	14	31 - 32	213	226
DSS 65	NIB - Install Az/El Axis Encoder	07/31/00 00:00	08/13/00 23:59	14	31 - 32	213	226
DSS 43	70M X-Band Uplink	08/14/00 00:00	10/22/00 23:59	70	33 - 42	227	296
DSS 43	NIB - Feedcone Structure	08/14/00 00:00	10/22/00 23:59	70	33 - 42	227	296
DSS 43	NIB - Chiller+HtExch HVAC	08/14/00 00:00	10/22/00 23:59	70	33 - 42	227	296
DSS 43	NIB - Replace 70M Motor	08/14/00 00:00	10/22/00 23:59	70	33 - 42	227	296
DSS 43	NIB - Hydrostatic Bearing	08/14/00 00:00	10/22/00 23:59	70	33 - 42	227	296
DSS 43	NIB - Az Cablewrap Rehab	08/14/00 00:00	10/22/00 23:59	70	33 - 42	227	296


DSN Operations
JOINT USERS RESOURCE ALLOCATION
PLANNING COMMITTEE
J. Hodder
May 18, 2000
NASA Jet Propulsion Laboratory



DSN System Availability

Data Type	March 2000	April 2000
Telemetry	99.2%	99.0%
Tracking	99.0%	98.5%
Command	99.1%	98.5%
Monitor	99.7%	99.4%
Radio Science	99.9%	99.3%
VLBI	95.8%	96.2%

JOINT USERS RESOURCE ALLOCATION
PLANNING COMMITTEE

GOLDSTONE

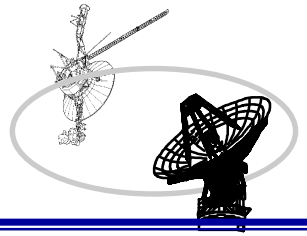
SOLAR SYSTEM RADAR

M. Slade
May 18, 2000

NASA Jet Propulsion Laboratory

JPL

Goldstone Solar System Radar



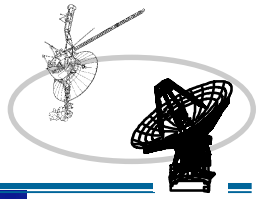
- New request for S- band observations of the Moon's South Pole in Winter 2000

- Observations will be: Arecibo Transmitting; DSS- 14 Receiving

- The purpose of these observations is an attempt to settle a debate about clean ice deposits in Lunar South polar permanently shaded regions

Honeywell

Honeywell Technology Solutions Inc.
Pasadena Operations
Customer Service Department

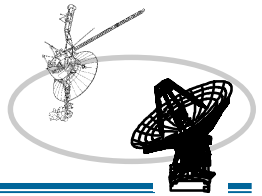


Radio Astronomy & Special Activities

April 20, 2000

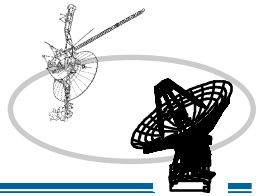
G. Martinez

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



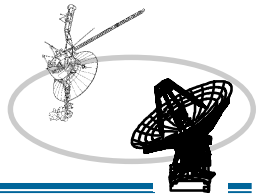
TEMPO
(Time and Earth Motion Precision Observations)

- Clock Sync
  - DOY 105
    - DSS-65 reported an antenna problem.
    - No failures were reported by DSS-15.
    - 96% of data time utilized.
    - Mark IV tapes sent to the JPL Correlator for processing.
  - Project Requirements not met.
    - Only 1 Clock Sync was scheduled in April.



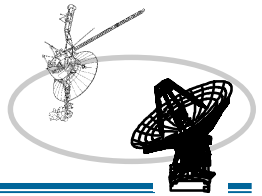
CAT M & E

- **DOY 114**
  - DSS-65 reported an antenna problem.
  - No problems were reported by DSS-15.
  - 97% of data time utilized.
  - Tapes sent to JPL Correlator for processing.
- **DOY 120**
  - DSS-15 reported an antenna problem.
  - No problems were reported by DSS-65.
  - 93% of data time utilized.
  - Tapes were sent to JPL Correlator for processing.
- **Metrics**
  - 2 observations – 95% of data time utilized.



European VLBI Network

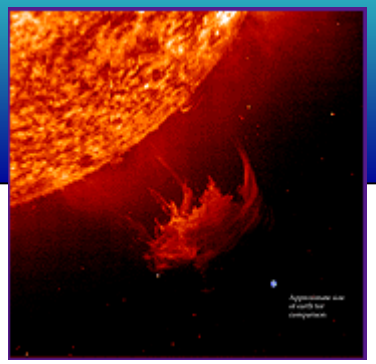
- Technical Operations Group Conference
  - Attended by RASA CSR, Pam Wolken.
    - Received EVN inputs on the DSN.
  - DSN data exceeded EVN expectations.
  - EVN experimenters were impressed and are ecstatic by the data received.



Future Activities

- **Space Geodesy Program**
  - CORE-B701 will be supported by DSS-65
  - Europe-56 will be supported by DSS-65
- **Gravity Probe-B**
  - DSS-43 and DSS-63 will support GPB.
- **European VLBI Network (EVN)**
  - DSS-63 will support GO003.

ULYSSES



JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

I. J. Webb

May 18, 2000

ULYSSES

- SPACECRAFT OPERATIONS ARE NORMAL. CURRENTLY EARTH POINTING MANUEVERS ARE BEING CONDUCTED EVERY SEVEN DAYS. INSTRUMENT CALIBRATIONS AND RECONFIGURATIONS ARE PERFORMED AS REQUIRED.

- DOY 117 - ULYSSES OPS TEAM SUCCESSFULLY TESTED THE ECC USING DSS 24 FOR UPLINK, DOWNLINK, COMMAND AND RANGING.

- DOY 128 - DSS 34 LOSS OF GROUND RECEIVER LOCK DUE TO ANTENNA KEYHOLE. ANTENNA GOT CONFUSED AND AUTOMATICALLY WENT INTO CLOCK-WISE CABLE-WRAP MODE. ANTENNA REACHED CABLE-WRAP LIMIT AND STOPPED. TOTAL REAL-TIME OUTAGE = 27 MINUTES. TOTAL PLAYBACK OUTAGE = 3 HOURS AND 1 MINUTE.

- DOY 132 - WHILE DSS 43 WAS TACKING (NEAR ZENITH) DSS 34 WENT TO ZENITH TO CALIBRATE THEIR TRANSMITTER. THEIR UPLINK WAS RECEIVED BY THE SPACECRAFT WHICH CAUSED A SHORT OUTAGE. IF THE UPLINK HAD BEEN RECEIVED DURING RECORDER ON TIME/MANUEVER, WE WOULD HAVE HAD A DNEL. PROBLEM IS BEING WORKED.

Ulysses Home Page: http://ulysses.jpl.nasa.gov/

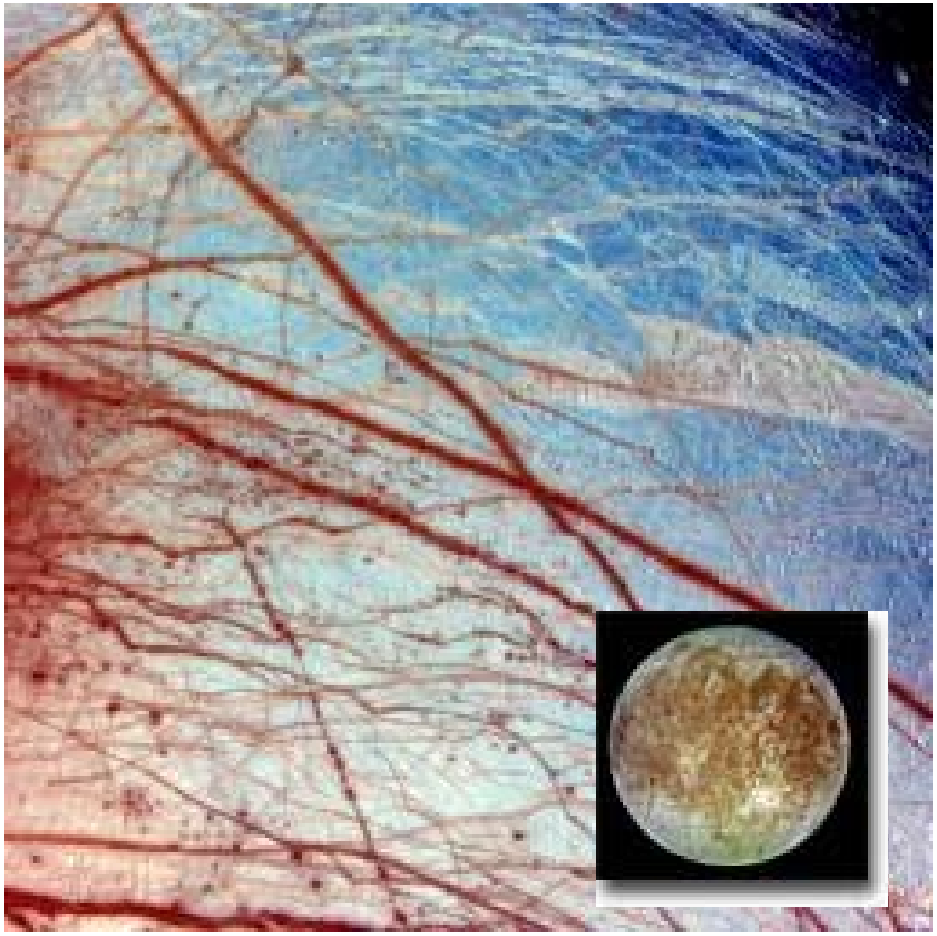
GALILEO EUROPA MISSION

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

J. McClure, Jr.

May 18, 2000

NASA Jet Propulsion Laboratory



GALILEO EUROPA MISSION

Significant Events

- Continued the playback of Io-27 encounter data.
- Exited solar conjunction (17 May)

Project Plans

- Execute OTM-87 (19 May)
- Ganymede encounter (20 May)
- Complete the playback of Io-27 encounter data
- Begin the playback of Ganymede-28 encounter data
- Execute OTM-88 (24 May)

Galileo Home Page: http://galileo.jpl.nasa.gov/

Deep Space 1

Joint Users Resource Allocation Planning Committee

K. Moyd

May 18, 2000

NASA Jet Propulsion Laboratory

Current Status

- Nominal state: Spacecraft is sun-pointed, “barbecue” mode.
- April 10: took 5 images for spacecraft stability analysis. These are to be used for evaluating the proposed new attitude control mechanisms.
- Throughout period: Conducted MICAS Transfer Test – taking an exposure every 30 seconds. This is the expected mode for attitude control using the camera as a star tracker. Modified sequences to clear occasional lockout condition.

Near Term Plans

- April 27 (Joint DSS 54/63 pass)
- Pre-track – take 25 images while slowly rotating.
    - Extension of previous spacecraft stability analysis
    - During track – Turn on PEPE (fields and particles instrument) to +5, -5 volts.
    - Test new utility for maintaining earth point.
- May 4 (DSS 15 – first 34-meter-only High Gain antenna to earth)
    - PEPE from +5, -5 to +5, -7 volts
- May 9 (Joint DSS 65/63 pass)
    - Turn PEPE off
- Continue MICAS Transfer tests through May 9.

M6F2 Flight Software Load

- Software to be loaded during 34-meter HEF passes (one or two per day) with HGA to earth during the week of May 30. Telemetry is not received until two-and-a-half to three hours into the pass.
- Software reboot and recovery is expected to occur on June 8, 9.
- Checking out the new software for spacecraft attitude control will occur from June 9 through mid-June.

Long Term Plans

- Thrusting will start in late June, early July.
- The M7 version of flight software will be uplinked in January – February, 2001.
  - Exact time depends on resolution of JURAP Action Item. (Expected start – February 19)
  - Period will include an encounter rehearsal.
- Thrusting continues until June, 2001
- At least one encounter rehearsal will be conducted between June and September.
- Comet Borrelly encounter will occur around September 24, 2001.

Deep Space 1 Home Page: http://nmp.jpl.nasa.gov/ds1/

NEAR Mission Operations

DSN Scheduling

May 18, 2000 JURAP

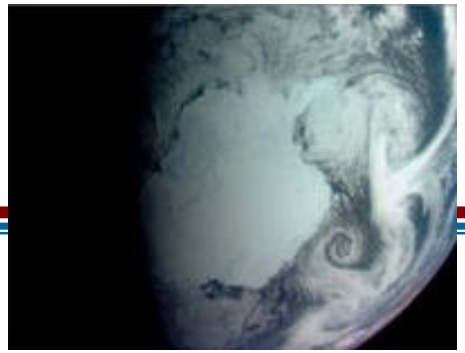
Gary Moore

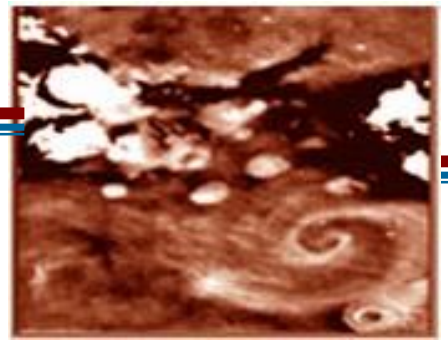
gary.moore@jhuapl.edu

(240)228-8352

Johns Hopkins University Applied Physics Laboratory

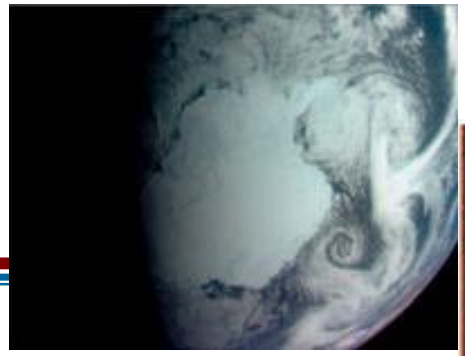
http://near.jhuapl.edu/

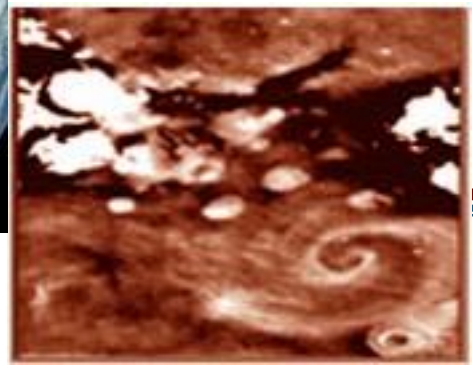




Status

- **NEAR has been in orbit around the asteroid Eros for 94 days.**
- Spacecraft is healthy.
- Range from Sun is 1.71699 AU
- Range from Earth is 1.07395 AU
- The RTLT is 17 min 58 sec (May 18th)
- NEAR currently using 1/6 convolutional encoding throughout for all tracks.
- Current highest downlink data rate on both the 34- and 70-meter antennas is 26.5 kbps.



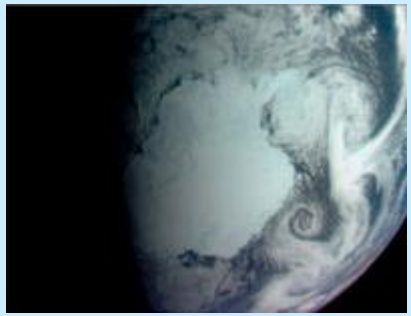


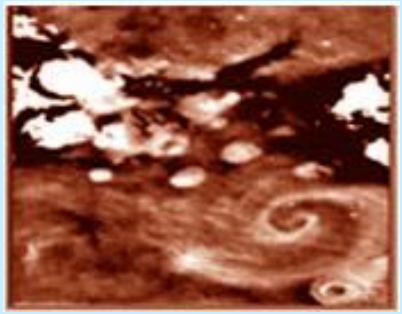
Last Month's Events

- 100 x 100 km Orbit Phase successfully completed.
- OCM-5 DOY 113 (04/22/00) 1730 UTC
  - Successfully transferred to 100 X 50 km orbit
- OCM-6 DOY 121 (04/30/00) 1615 UTC
  - Successfully circularized orbit at 50 km
- Spacecraft momentum management events successful.
- Multi-spectral Imager (MSI) commanding problems continue to be encountered.
- NLR Shutdown on DOY 123 due to tripping overcurrent rule.
  - Quickly restored to operation and flight software changes requested to prevent recurrence.

Mission Status

- **Mission Highly Successful So Far**
  - Thousands of images and laser altimeter points collected.
  - Asteroid shape and gravity model refined.
  - Magnetometer and X-ray spectrometer data collected.
- **Reprogrammed Mission**
  - 35 x 35 km orbit phase planned for July-August.
  - Fuel reserves expected to be adequate for full 12 months of Eros operations.
- **Orbital Operations**
  - Completed 200 x 200 km orbit phase.
  - 100 x 100 km phase to be completed 04/22/00.
  - 50 x 50 km orbit phase began 04/30/00.
  - Begin 35 x 35 km orbit transfer 07/07/00.



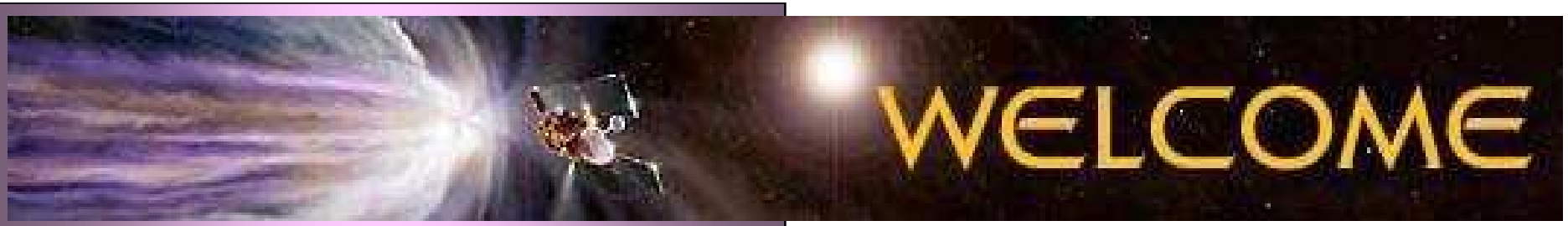


Upcoming Activities

- **35 x 35 km orbit phase - DOY 196 (07/14/00) to DOY 205 (07/23/00)**
  - **More precise asteroid mass properties determination.**
    - **Minimal spacecraft maneuvering to reduce orbit disturbances.**
  - **Higher S/N ratio X- and Gamma-Ray Spectrometer data at lower orbits.**

Revised NEAR Maneuvers Plans

- **OCM-7 DOY 180 UTC 189 (07/07/2000)**
  - Puts S/C into 50 x 35 km orbit.
- **OCM-8 DOY 196, 0445 UTC (07/14/2000)**
  - Puts S/C into 37 x 35 km orbit.
- **OCM-9 DOY 205, 1701 UTC (07/23/2000)**
  - Puts S/C into 35 x 50 km orbit.
- **OCM-10 DOY 212, 1801 UTC (07/30/2000)**
  - Puts S/C into 50 x 51 km orbit.
- **OCM-11 DOY 221, 1056 UTC (08/08/2000)**
  - Retrograde 50 km ~1.91 m/sec - into 51 X 51 km orbit.
- **OCM-12 DOY 239, 0601 UTC (08/26/2000)**
  - Transfer to 100 km ~1.14 m/sec - into 100 x 50 km orbit.



STARDUST Project

JOINT USERS
RESOURCE ALLOCATION
PLANNING COMMITTEE

R. E. Ryan

May 18, 2000

NASA Jet Propulsion Laboratory

http://stardust.jpl.nasa.gov

STARDUST Project

MISSION STATUS

- SPACECRAFT IS IN GOOD HEALTH, OPERATING WELL
  - Range from Earth - 2.56 AU (42 mins RTLT)

- Completed INTERSTELLAR DUST COLLECTION PERIOD 1
  - Capsule (SRC) was opened and aerogel deployed on February 22.
  - Collector angel adjusted bi-weekly to point to Interstellar Stream.
  - Collector was stowed on May 1st , and the Capsule (Heat Shield) closed.

STARDUST Project

MISSION STATUS Cont'd

- **PRESENTLY IN BACKGROUND CRUISE SEQUENCE 17 (SC017)**
  Controls the spacecraft for communication periods for April 24 to May 22
  D/L bit rate is 100 bps with some 1050 on the HGA (for playbacks)
  uplink rate is 31.25 bps

- **SCO18 HAS BEEN Uplinked, May 17; TO RUN from May 22 to June 19**

- **TMOD DSN SUPPORT HAS BEEN VERY GOOD THIS PAST PERIOD**
  There were some station problems in Week 19
  (transmitter out at DSS 15) but we have sufficient Radio Metric for TCM

WE WILL MISS OUR NOPE, JOSEPHINE CONLEY

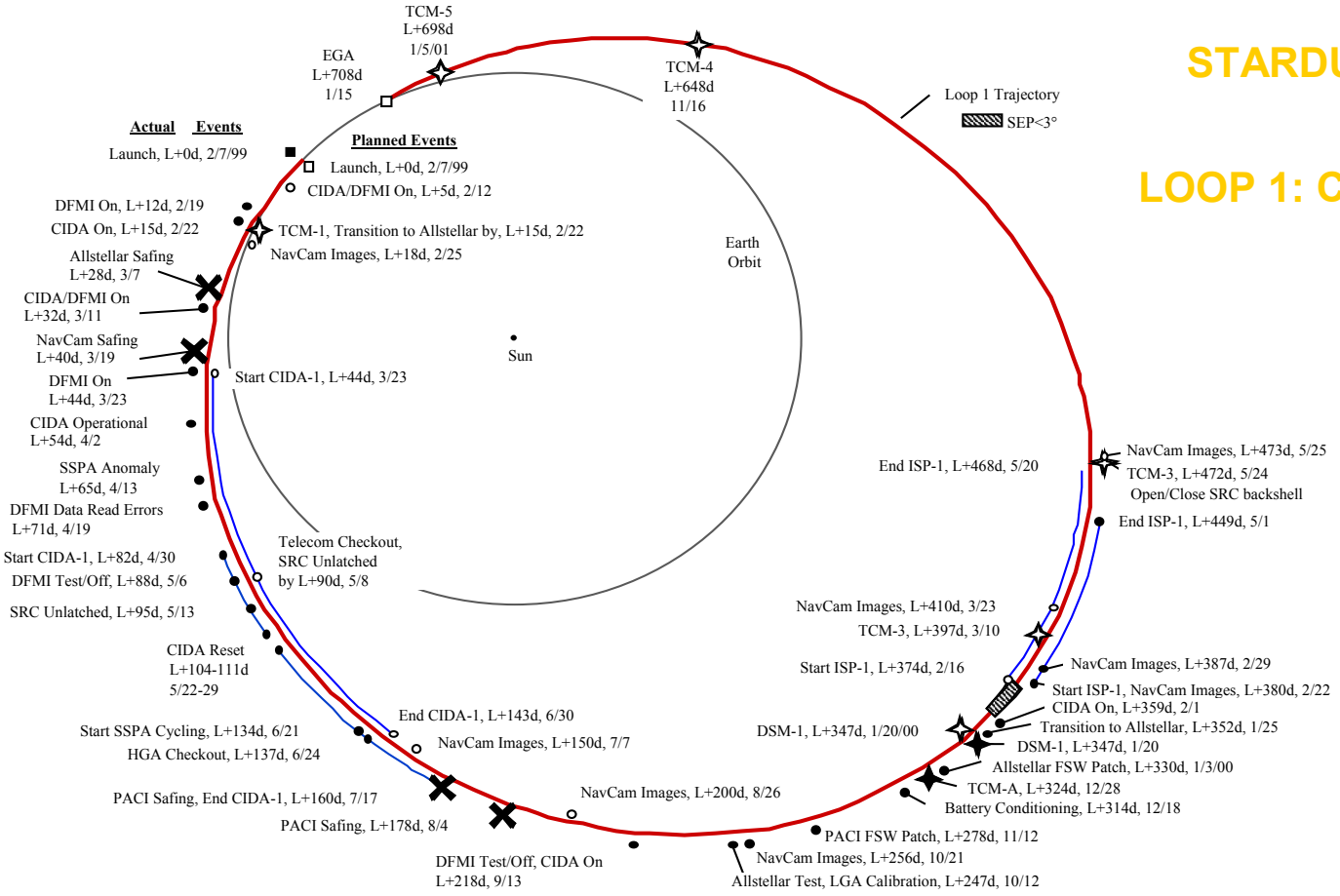
RER 3-16-00

STARDUST Project

UPCOMING EVENTS

- TCM-3, the DSM cleanup maneuver set for May 24
  - Manuever Sequence will be separate from the Background Sequence estimated to require 2 m/s delta V (just over a one min burn)
  - Capsule shell will be opened to observe change in mass properties during thrust for use during the encounter (similar conditions).
- Navigation Camera Images planned for May 25
  - 30 images planned using the filters, mirror and periscope
  - Trying to determine the nature and scope of the contamination seen previously
- NEXT MAJOR EVENT IS EARTH GRAVITY ASSIST on January 15, 2001
  - TCM-4 is planned for November 16

STARDUST Project



STARDUST "AS FLOWN" MISSION

LOOP 1: CIDA-1, DSM-1, ISP-1

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

VOYAGER

FLIGHT OPERATIONS

J. C. Hall, Jr.

May 18, 2000

VOYAGER
FLIGHT OPERATIONS

FLIGHT SYSTEM STATUS

MISSION STATUS

VOYAGER 1

- HELIOCENTRIC DISTANCE – 77.5 AU, RTLT – 21h15m30s
- SPACECRAFT REMAINS HEALTHY
- MAJOR ACTIVITY - DTR PLAYBACK (LOSS - DSS14 DOWN), ASCAL, AND MAGROL

VOYAGER 2

- HELIOCENTRIC DISTANCE – 60.9 AU, RTLT – 16h44m18s
- SPACECRAFT REMAINS HEALTHY

VOYAGER
FLIGHT OPERATIONS

GROUND SYSTEM STATUS

(April 15, 2000 – May 12, 2000)

DSN – OVERALL SUPPORT – GOOD

TOTAL SUPPORT TIME, OUTAGE TIME, % of OUTAGE TIME

S/C	SCHED SUPPORT	ACTUAL SUPPORT	70M TIME	SIGNIFICANT OUTAGE TIME	% of OUTAGE TIME
31	444.1*	444.1	209.8	9.6 (1.5)	2.5
32	248.9	248.9	128.5	0.0 (0.5)	0.2

* Substituted 0.9 hours of DSS-63 support with DSS-25 as a result of a power failure at DSS-63.
Substituted 2.3 hours of DSS-15 support with DSS-25 to repair a transmitter problem at DSS-25.
Substituted 1.5 hours of DSS-63 support with DSS-25 as a result of a power failure.

VOYAGER HOMEPAGE - http://vraptor.jpl.nasa.gov

WELCOME TO THE CASSINI MISSION!

Joint Users Resource Allocation (JURAP) Committee Meeting

Dave Doody

Cassini MSSO Ops Lead

MAY 18, 2000

NASA Jet Propulsion Laboratory

Cassini Activities

Operations continue nominally

- PASSED SUPERIOR CONJUNCTION 13 MAY WITH SEP OF 5.6 DEGREES
- EXCELLENT DSN SUPPORT OVERALL!

Instrument Checkout (ICO) 2

- UPLINKING FLIGHT SOFTWARE TO SEVERAL INSTRUMENTS NEXT WEEK.

TCM 14 Executes 14 June 2000

- COURSE ADJUSTMENT FOR PHOEBE ENCOUNTER PRIOR TO SOI IN 2004

Jupiter Flyby Science Planning

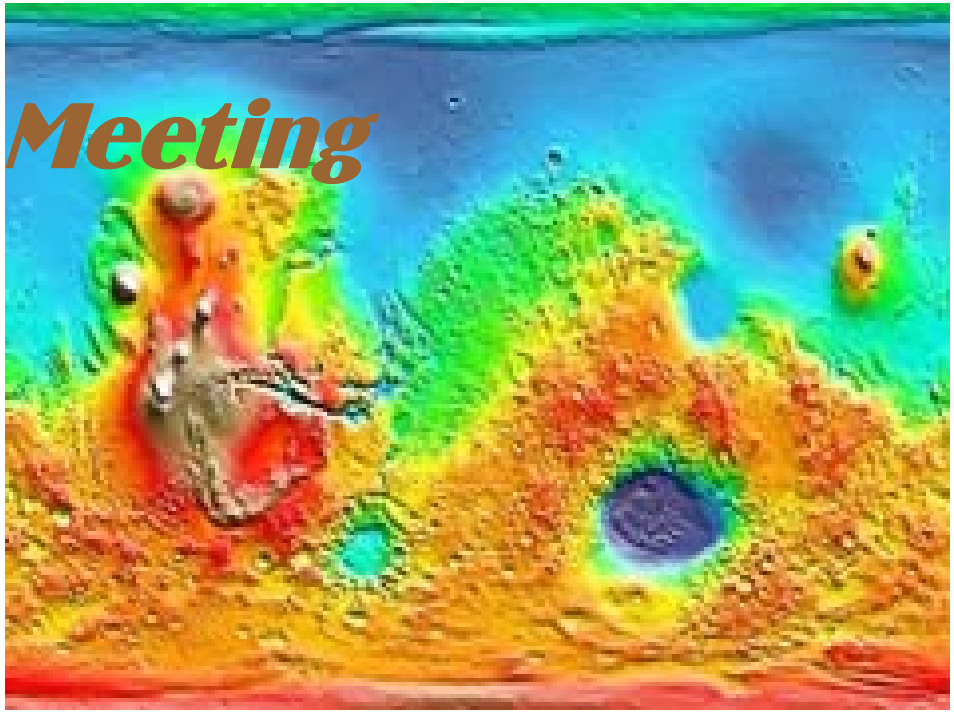
- ALL RESOURCE ALLOCATION REQUESTS ARE IN THE SYSTEM NOW (THRU EARLY 2001)
- PLANNING CONTINUES FOR:
  - CASSINI-ONLY OBSERVATIONS
  - SIMULTANEOUS HST AND CASSINI OBSERVATIONS
  - SIMULTANEOUS GALILEO AND CASSINI OBSERVATIONS
  - OUTREACH COORDINATION WITH GAVRT

Cassini Home Page: http://www.jpl.nasa.gov/cassini/

MSOO

Flight Operations Status

JURAP Committee Meeting



Mars Surveyor Operations Office

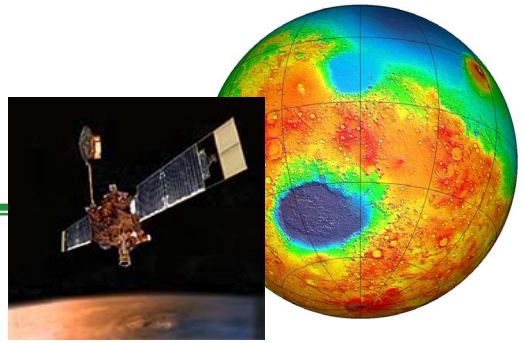
E. E. Brower

May 18, 2000

NASA Jet Propulsion Laboratory

Mars Surveyor Operations

MGS Events

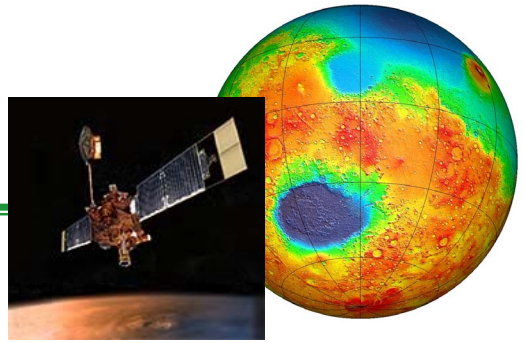


- **Beta-Supplement operations began** — **February 7, 2000**
- **Completed 1 year of mapping** — **March 9**
- **MOC Focus Calibrations** — ***Completed Successfully***
- **MOLA Polar Scans** — ***Completed Successfully***
- **Mapping Orbit# 5000** — **April 20**
- **Bistatic Radar R/S Measurement** — ***Completed Successfully***
- **So. Hems. Occul. Pitchover Maneuver** — **May 21-22**
  - During the MGS first Fixed HGA (FHGA) mode to collect RS engress measurements, thermal modeling miss modeled one of the science instruments (MOLA) causing the instrument to reach the flight allowable limits. This caused the project to reevaluate the 8 days a month of the FHGA mode operations. Project elected to the a spacecraft pitchover maneuver to collect Radio Science engress measurements.
- **Science Campaign D** — **May 29 - Jun 5**
- **DSS 14 X-Band Uplink Demo** — ***TDB***
- **Solar Conjunction** — **July 2**
- **Extended Mission Planning** — **Underway**

MGS Home Page: http://mars.jpl.nasa.gov/mgs/

Mars Surveyor Operations

'01 Status



- ***Orbiter to launch in April '01***

- ***Lander looking to fly in '03***

Mars Surveyor 2001-2003: http://mars.jpl.nasa.gov/2001/index.html